

IN THE CLAIMS:

Claims 1-10 Canceled

11. (Previously Presented) A soil stabilizer for treating a ground surface, comprising:
- a stabilizer frame;
 - a rotor rotatably mounted with respect to the stabilizer frame, the rotor being adapted for rotatably engaging a depth of the ground surface;
 - a rotatable axle connected with respect to the stabilizer frame and adapted for moving the stabilizer frame and rotor across the ground surface; and
 - a track apparatus operatively mounted to the rotatable axle, the track apparatus providing for movement of the stabilizer frame and rotor across the ground surface, the track apparatus including:
 - a continuous flexible track having an upper length and a ground-engaging lower length and including an inner surface;
 - an axle wheel secured to the rotatable axle, the axle wheel engaging the inner surface of the flexible track along the upper length to drive the flexible track in response to rotation of the axle;
 - a plurality of wheels engaging the inner surface of the track, including leading and trailing idler wheels;
 - at least one bogie wheel engaging only a middle portion of the lower length of the track;
 - and
 - an apparatus frame for mounting the axle wheel, the apparatus frame being of a uni-body construction that includes a plurality of fixed-mounts in fixed relative positions, each fixed-mount defining an axis, wherein:
 - the axle wheel is rotatably mounted to one of the fixed-mounts and turns on the respective fixed-mount axis;
 - one of the idler wheels is rotatably mounted to one of the fixed-mounts and turns on the

respective fixed-mount axis,

the at least one bogie wheel is rotatably mounted to one of the fixed-mounts and turns on the respective fixed-mount axis, and

an idler-mounting bracket is pivotably mounted to another of the fixed-mounts and pivots on the respective fixed-mount axis, the bracket having an idler-mount defining an idler-mount axis at which the other idler wheel is rotatably mounted in variable positions with respect to the apparatus frame.

12. (Original) The soil stabilizer of claim 11 wherein the apparatus frame defines a lateral recess receiving the axle wheel.

13. (Original) The soil stabilizer of claim 11 wherein the apparatus frame includes a spindle hub for rotatably receiving the rotatable axle.

14. (Original) The soil stabilizer of claim 11 wherein the fixed-mounts comprise apertures for receiving axles therethrough.

15. (Original) The soil stabilizer of claim 11 wherein the trailing idler wheel is rotatably mounted to one of the fixed-mounts and the leading idler wheel is rotatably mounted to the idler-mount.

16. (Original) The soil stabilizer of claim 11 wherein the trailing idler wheel comprises a pair of axially-aligned wheels and the leading idler wheel comprises a pair of axially-aligned wheels.

17. (Original) The soil stabilizer of claim 11 wherein the track apparatus further comprises a leading idler assembly attached to the apparatus frame at one of the fixed mounts, the leading idler assembly including the leading idler wheel engaging the flexible track.

18. (Previously Presented) A soil stabilizer for treating a ground surface, comprising:
a stabilizer frame;

a rotor rotatably mounted with respect to the stabilizer frame, the rotor movable with respect to the ground surface such that the rotor may engage various depths of earth to cut and remove the earth;

a rotatable axle connected with respect to the stabilizer frame and adapted for moving the stabilizer frame and rotor across the ground surface; and

a track apparatus operatively mounted to the rotatable axle, the track apparatus providing for movement of the stabilizer frame and rotor across the ground surface, the track apparatus including:

a continuous flexible track having an upper length and a ground-engaging lower length and including an inner surface;

an axle wheel mountable to the rotatable axle for rotational movement therewith, the axle wheel engaging the inner surface of the flexible track along the upper length to drive the flexible track in response to rotation of the axle;

an apparatus frame for mounting the axle wheel;

an idler assembly having an idler wheel engaging the track, the idler assembly being moveable with respect to the apparatus frame; and

a tensioning device for maintaining tension on the continuous flexible track, the tensioning device comprising:

a main-cylinder housing interconnected to one of the apparatus frame and the idler assembly, the housing extending along an axis and defining a main chamber therein;

a main piston having a first end operatively connected to the other of the apparatus frame

and the idler assembly and a second end slidably received within the chamber, the piston movable between a retracted position and an extended position;

a primary dampening structure for resisting movement of the piston toward the retracted position for a first predetermined axial length; and

a secondary dampening structure for resisting movement of the piston toward the retracted position for a further axial length beyond the first predetermined axial length, the secondary dampening structure resisting movement of the piston independent of the primary dampening structure.

19. (Original) The soil stabilizer of claim 18 wherein the primary dampening structure includes:

a primary cylinder extending along an axis and defining a primary chamber therein; and

a primary piston slidably received in the primary cylinder and movable axially between a first and second position, the primary piston dividing the primary chamber into a first portion for receiving a pressurized gas and a second portion.

20. (Original) The soil stabilizer of claim 19 wherein the secondary dampening structure includes:

a secondary cylinder extending along an axis and defining a secondary chamber therein;

and

a secondary piston slidably received in the secondary cylinder and movable axially between a first and second position, the secondary piston dividing the secondary chamber into a first portion for receiving a pressurized gas and a second portion; whereby the conduit interconnects the main chamber and the second portion of the secondary chamber and wherein the hydraulic fluid is disposed within the second portion of the secondary chamber.

21. (Original) The soil stabilizer of claim 20 wherein the pressure of the pressurized gas in the first portion of the secondary chamber is greater than the pressure of the pressurized gas in the first portion of the primary chamber.

22. (Original) The soil stabilizer of claim 21 wherein the primary and secondary dampening structures operate to progressively increase resistance to movement of the idler wheel toward the deflected position as the idler wheel moves toward the deflected position.

Claims 23-33 Canceled

34. (Previously Presented) In a soil stabilizer having a stabilizer frame, a rotor rotatably mounted with respect to the stabilizer frame, the rotor being adapted for rotatably engaging a depth of the ground surface, and a rotatable axle connected with respect to the stabilizer frame and adapted for moving the stabilizer frame and rotor across the ground surface, the improvement comprising mounting a track apparatus to the rotatable axle, the track apparatus including:

a continuous flexible track having an upper length and a ground-engaging lower length and including an inner surface;

an axle wheel secured to the rotatable axle, the axle wheel engaging the inner surface of the flexible track along the upper length to drive the flexible track in response to rotation of the axle;

a plurality of wheels engaging the inner surface of the track, including leading and trailing idler wheels;

at least one bogie wheel engaging only a middle portion of the lower length of the track;
and

an apparatus frame for mounting the axle wheel, the apparatus frame being of a uni-body construction that includes a plurality of fixed-mounts in fixed relative positions, each fixed-

mount defining an axis, wherein:

the axle wheel is rotatably mounted to one of the fixed-mounts and turns on the respective fixed-mount axis;

one of the idler wheels is rotatably mounted to one of the fixed-mounts and turns on the respective fixed-mount axis,

the at least one bogie wheel is rotatably mounted to one of the fixed-mounts and turns on the respective fixed-mount axis, and wherein

an idler-mounting bracket is pivotably mounted to another of the fixed-mounts and pivots on the respective fixed-mount axis, the bracket having an idler-mount defining an idler-mount axis at which the other idler wheel is rotatably mounted in variable positions with respect to the apparatus frame.

35. (Previously Presented) The improvement of claim 34, wherein, when the soil stabilizer comprises a non-powered rotatable trailing axle, the improvement further comprises mounting a non-powered trailing track apparatus to the trailing axle, whereby a rear portion of the soil stabilizer is provided with improved stability.